

ABSTRACT

SYSTEM, METHOD, AND APPARATUS FOR IMPROVING THE STEALTH CAPABILITY OF AN OPTICAL INSTRUMENT

[0030] A tube-mounted inclined optical flat for improving the stealth capability of an optical aperture is disclosed. The optical flat has a light-absorbing finish on its rear surface, and is mounted in front of existing instrument optics. The light from the scene being viewed passes through the optical flat and is undistorted. Any light that is reflected from the optical flat is absorbed by the light-absorbing tube. Light that enters the distal end of tube is absorbed in the same manner. Any light entering the instrument optics from the observer's end and internal reflected light emanate from within the optics. Much of this light is absorbed by the rear finish on the optical flat. Selection of the optics' virtual focal points and placement of the optical flat relative to the optics reduce the size requirement of the rear finish on the optical flat.